

Table B-4. **Survey of Industrial Research and Development--unit response rates-number and percentage of companies that responded to the survey and percentage of companies that performed R&D, by industry and by type of survey form: 1999**

Page 1 of 8

Industry and form received	NAICS codes	Number of companies that received a questionnaire	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
All industries.....	21-23, 31-33, 42, 44-81	24,219	20,149	83.2	16.9
Manufacturing.....	31-33	4,902	4,076	83.2	44.7
Food.....	311	165	140	84.9	60.0
Beverage and tobacco products.....	312	13	12	92.3	50.0
Textiles, apparel, and leather.....	313-16	223	180	80.7	41.7
Wood products.....	321	293	256	87.4	15.2
Paper, printing and support activities.....	322, 323	138	120	87.0	40.0
Petroleum and coal products.....	324	22	19	86.4	68.4
Chemicals.....	325	298	250	83.9	84.0
Basic chemicals.....	3251	153	126	82.4	75.4
Resin, synthetic rubber, fibers, and filament.....	3252	16	14	87.5	100.0
Pharmaceuticals and medicines.....	3254	53	43	81.1	97.7
Other chemicals.....	325 (minus 3251-52, 3254)	76	67	88.2	88.1
Plastics and rubber products.....	326	337	273	80.8	57.1
Nonmetallic mineral products.....	327	49	43	87.8	62.8
Primary metals.....	331	104	91	87.5	56.0
Fabricated metal products.....	332	358	307	86.0	53.8
Machinery.....	333	336	281	83.6	70.1
Computer and electronic products.....	334	426	321	75.4	89.7
Computers and peripheral equipment.....	3341	62	46	75.4	91.3
Communications equipment.....	3342	84	51	60.7	94.1
Semiconductor and other electronic components.....	3344	137	111	80.4	86.5
Navigational, measuring, electromedical, and control instruments.....	3345	115	93	80.9	93.6
Other computer and electronic products.....	334 (minus 3341-42, 3344-45)	28	20	71.4	75.0
Electrical equipment, appliances, and components.....	335	158	128	81.0	74.2
Transportation equipment.....	336	142	116	81.7	70.7
Motor vehicles, trailers, and parts.....	3361-63	64	53	82.8	69.8
Aerospace products and parts.....	3364	28	20	71.4	80.0
Other transportation equipment.....	336 (minus 3361-64)	50	43	86.0	67.4

See explanatory information and SOURCE at end of table.

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Page 2 of 8

Industry and form received	NAICS codes	Number of companies that received a questionnaire	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Furniture and related products.....	337	93	86	92.5	48.8
Miscellaneous manufacturing.....	339	313	262	83.7	56.5
Medical equipment and supplies.....	3391	116	92	79.3	75.0
Other miscellaneous manufacturing.....	339 (minus 3391)	197	170	86.3	46.5
Other manufacturing ¹	31-33 (minus 311-16, 321-27, 331-37, 339)	--	--	--	--
Small manufacturing companies ²	Fewer than 50 employees	1,434	1,191	83.1	7.9
Nonmanufacturing.....	21-23, 42, 44-81	19,317	16,073	83.2	9.8
Mining, extraction, and support activities.....	21	85	73	85.9	28.8
Utilities.....	22	64	57	89.1	70.2
Construction.....	23	1,493	1,294	86.7	1.4
Trade.....	42, 44, 45	3,059	2,636	86.2	5.0
Transportation and warehousing.....	48, 49	455	381	83.7	3.9
Information.....	51	670	528	82.1	35.4
Publishing.....	511	406	315	77.6	67.0
Newspaper, periodical, book, and database.....	5111	81	67	82.7	13.4
Software.....	5112	325	248	76.3	81.5
Broadcasting and telecommunications.....	513	132	103	78.0	19.4
Radio and television broadcasting.....	5131	37	31	81.6	12.9
Telecommunications.....	5133	42	31	73.8	35.5
Other broadcasting and telecommunications.....	513 (minus 5131, 5133)	53	41	78.9	12.2
Other information.....	51 (minus 511, 513)	132	110	83.3	26.4
Finance, insurance, and real estate.....	52, 53	860	737	85.7	5.6
Professional, scientific, and technical services.....	54	3,433	2,841	82.8	32.4

See explanatory information and SOURCE at end of table.

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Page 3 of 8

Industry and form received	NAICS codes	Number of companies that received a questionnaire	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Architectural, engineering, and related services.....	5413	904	791	87.5	19.0
Computer systems design and related services.....	5415	1,276	976	76.5	39.0
Scientific R&D services.....	5417	515	429	83.3	83.2
Other professional, scientific, and technical services.....	54 (minus 5413, 5415, 5417)	738	645	87.4	5.1
Management of companies and enterprises.....	55	99	82	82.8	12.2
Health care services.....	621-23	890	763	85.7	1.8
Other nonmanufacturing.....	56, 61, 624, 71, 72, 81	3,816	3,061	80.2	2.0
Small nonmanufacturing companies ²	Fewer than 15 employees	4,393	3,620	82.4	1.2
Companies that received Form RD-1					
All industries.....	21-23, 31-33, 42, 44-81	1,602	1,293	80.7	97.1
Manufacturing.....	31-33	946	774	81.8	97.7
Food.....	311	33	27	81.8	96.3
Beverage and tobacco products.....	312	3	3	100.0	100.0
Textiles, apparel, and leather.....	313-16	15	11	73.3	100.0
Wood products.....	321	4	4	100.0	100.0
Paper, printing and support activities.....	322, 323	32	27	84.4	96.3
Petroleum and coal products.....	324	11	9	81.8	100.0
Chemicals.....	325	140	123	87.9	97.6
Basic chemicals.....	3251	39	34	87.2	97.1
Resin, synthetic rubber, fibers, and filament.....	3252	14	14	100.0	92.9
Pharmaceuticals and medicines.....	3254	47	39	83.0	100.0
Other chemicals.....	325 (minus 3251-52, 3254)	40	36	90.0	97.2
Plastics and rubber products.....	326	46	40	87.0	100.0
Nonmetallic mineral products.....	327	12	12	100.0	91.7
Primary metals.....	331	21	18	85.7	100.0
Fabricated metal products.....	332	38	33	86.8	100.0
Machinery.....	333	110	91	82.7	94.5

See explanatory information and SOURCE at end of table.

Table B-4. **Survey of Industrial Research and Development--unit response rates-number and percentage of companies that responded to the survey and percentage of companies that performed R&D, by industry and by type of survey form: 1999**

Page 4 of 8

Industry and form received	NAICS codes	Number of companies that received a questionnaire	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Computer and electronic products.....	334	294	226	76.9	97.4
Computers and peripheral equipment.....	3341	36	28	77.8	96.4
Communications equipment.....	3342	61	38	62.3	97.4
Semiconductor and other electronic components.....	3344	93	79	85.0	98.7
Navigational, measuring, electromedical, and control instruments.....	3345	94	76	80.9	97.4
Other computer and electronic products.....	334 (minus 3341-42, 3344-45)	10	5	50.0	80.0
Electrical equipment, appliances, and components.....	335	49	40	81.6	100.0
Transportation equipment.....	336	69	55	79.7	100.0
Motor vehicles, trailers, and parts.....	3361-63	35	29	82.9	100.0
Aerospace products and parts.....	3364	23	16	69.6	100.0
Other transportation equipment.....	336 (minus 3361-64)	11	10	90.9	100.0
Furniture and related products.....	337	11	11	100.0	100.0
Miscellaneous manufacturing.....	339	56	43	76.8	97.7
Medical equipment and supplies.....	3391	41	32	78.1	96.9
Other miscellaneous manufacturing.....	339 (minus 3391)	15	11	73.3	100.0
Other manufacturing ¹	31-33 (minus 311-16, 321-27, 331-37, 339)	--	--	--	--
Small manufacturing companies ²	Fewer than 50 employees	2	1	50.0	100.0
Nonmanufacturing.....	21-23, 42, 44-81	656	519	79.1	96.3
Mining, extraction, and support activities	21	14	14	100.0	92.9
Utilities.....	22	14	12	85.7	100.0
Construction.....	23	5	4	80.0	100.0
Trade.....	42, 44, 45	107	80	74.8	97.5
Transportation and warehousing.....	48, 49	4	4	100.0	75.0
Information.....	51	153	115	80.2	97.7
Publishing.....	511	119	89	74.8	97.8
Newspaper, periodical, book, and database.....	5111	7	4	57.1	100.0
Software.....	5112	112	85	75.9	97.7

See explanatory information and SOURCE at end of table.

Table B-4. **Survey of Industrial Research and Development--unit response rates-number and percentage of companies that responded to the survey and percentage of companies that performed R&D, by industry and by type of survey form: 1999**

Page 5 of 8

Industry and form received	NAICS codes	Number of companies that received a questionnaire	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Broadcasting and telecommunications.....	513	14	11	78.6	100.0
Radio and television broadcasting.....	5131	2	2	100.0	100.0
Telecommunications.....	5133	12	9	75.0	100.0
Other broadcasting and telecommunications.....	513 (minus 5131, 5133)	0	--	--	--
Other information.....	51 (minus 511, 513)	20	15	75.0	86.7
Finance, insurance, and real estate.....	52, 53	35	27	77.1	96.3
Professional, scientific, and technical services.....	54	297	245	82.5	97.6
Architectural, engineering, and related services.....	5413	59	44	74.6	90.9
Computer systems design and related services.....	5415	60	47	78.3	97.9
Scientific R&D services.....	5417	167	144	86.2	100.0
Other professional, scientific, and technical services.....	54 (minus 5413, 5415, 5417)	11	10	90.9	90.0
Management of companies and enterprises.....	55	0	--	--	--
Health care services.....	621-23	2	2	100.0	100.0
Other nonmanufacturing.....	56, 61, 624, 71, 72, 81	20	14	70.0	71.4
Small nonmanufacturing companies ²	Fewer than 15 employees	5	2	40.0	100.0
Companies that received Form RD-1A					
All industries.....	21-23, 31-33, 42, 44-81	22,617	18,856	83.4	11.3
Manufacturing.....	31-33	3,956	3,302	83.5	32.2
Food.....	311	132	113	85.6	51.3
Beverage and tobacco products.....	312	10	9	90.0	33.3
Textiles, apparel, and leather.....	313-16	208	169	81.3	37.9
Wood products.....	321	289	252	87.2	13.9
Paper, printing and support activities.....	322, 323	106	93	87.7	23.7
Petroleum and coal products.....	324	11	10	90.9	40.0
Chemicals.....	325	158	127	80.4	70.9

See explanatory information and SOURCE at end of table.

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Page 6 of 8

Industry and form received	NAICS codes	Number of companies that received a questionnaire	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Companies that received Form RD-1A					
Resin, synthetic rubber, fibers, and filament.....	3252	2	0	0.0	0.0
Pharmaceuticals and medicines.....	3254	6	4	66.7	75.0
Other chemicals.....	325 (minus 3251-52, 3254)	36	31	86.1	77.4
Plastics and rubber products.....	326	292	233	79.8	49.8
Nonmetallic mineral products.....	327	37	31	83.8	51.6
Primary metals.....	331	83	73	88.0	45.2
Fabricated metal products.....	332	319	274	85.9	48.2
Machinery.....	333	226	190	84.1	58.4
Computer and electronic products.....	334	132	95	72.0	71.6
Computers and peripheral equipment.....	3341	25	18	72.0	83.3
Communications equipment.....	3342	23	13	56.5	84.6
Semiconductor and other electronic components.....	3344	45	32	71.1	56.3
Navigational, measuring, electromedical, and control instruments.....	3345	21	17	81.0	76.5
Other computer and electronic products.....	334 (minus 3341-42, 3344-45)	18	15	83.3	73.3
Electrical equipment, appliances, and components.....	335	109	88	80.7	62.5
Transportation equipment.....	336	73	61	83.6	44.3
Motor vehicles, trailers, and parts.....	3361-63	29	24	82.8	33.3
Aerospace products and parts.....	3364	5	4	80.0	0.0
Other transportation equipment.....	336 (minus 3361-64)	39	33	84.6	57.6
Furniture and related products.....	337	82	75	91.5	41.3
Miscellaneous manufacturing.....	339	257	219	85.2	48.4
Medical equipment and supplies.....	3391	75	60	80.0	63.3
Other miscellaneous manufacturing.....	339 (minus 3391)	182	159	87.4	42.8
Other manufacturing ¹	31-33 (minus 311-16, 321-27, 331-37, 339)	--	--	--	--
Small manufacturing companies ²	Fewer than 50 employees	1,432	1,190	83.1	7.8

See explanatory information and SOURCE at end of table.

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Page 7 of 8

Industry and form received	NAICS codes	Number of companies that received a questionnaire	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Companies that received Form RD-1A					
Nonmanufacturing.....	21-23, 42, 44-81	18,661	15,554	83.4	6.9
Mining, extraction, and support activities.....	21	71	59	83.1	13.6
Utilities.....	22	50	45	90.0	62.2
Construction.....	23	1,488	1,290	86.7	1.1
Trade.....	42, 44, 45	2,952	2,556	86.6	2.1
Transportation and warehousing.....	48, 49	451	377	83.6	3.2
Information.....	51	517	413	82.3	28.0
Publishing.....	511	287	226	78.8	54.9
Newspaper, periodical, book, and database.....	5111	74	63	85.1	7.9
Software.....	5112	213	163	76.5	73.0
Broadcasting and telecommunications.....	513	118	92	78.0	9.8
Radio and television broadcasting.....	5131	36	29	80.6	6.9
Telecommunications.....	5133	30	22	73.3	9.1
Other broadcasting and telecommunications.....	513 (minus 5131, 5133)	52	41	78.9	12.2
Other information.....	51 (minus 511, 513)	112	95	84.8	16.8
Finance, insurance, and real estate.....	52, 53	825	710	86.1	2.1
Professional, scientific, and technical services.....	54	3,136	2,596	82.8	26.3

See explanatory information and SOURCE at end of table.

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Page 8 of 8

Industry and form received	NAICS codes	Number of companies that received a questionnaire	Number of companies that responded to the survey	Percentage of companies that responded to the survey	Percentage of responding companies that reported R&D
Companies that received Form RD-1A					
Architectural, engineering, and related services.....	5413	845	747	88.4	14.7
Computer systems design and related services.....	5415	1,216	929	76.4	36.1
Scientific R&D services.....	5417	348	285	81.9	74.7
Other professional, scientific, and technical services.....	54 (minus 5413, 5415, 5417)	727	635	87.4	3.8
Management of companies and enterprises.....	55	99	82	82.8	12.2
Health care services.....	621-23	888	761	85.7	1.6
Other nonmanufacturing.....	56, 61, 624, 71, 72, 81	3,796	3,047	80.3	1.7
Small nonmanufacturing companies ²	Fewer than 15 employees	4,388	3,618	82.5	1.1

¹ "Other manufacturing" is intentionally left blank to allow for possible future North American Industry Classification System (NAICS) expansion.

² The frame from which the statistical sample was selected was divided into two partitions based on total company employment. In the manufacturing sector, companies with employment of 50 or more were included in the large company partition. In the nonmanufacturing sector, companies with employment of 15 or more were included in the large company partition. Companies in the respective sectors with employment below these values, but with at least 5 employees, were included in the small company partition. The purpose of partitioning the sample this way was to reduce the variability in industry estimates largely attributed to the random year-to-year selection of small companies by industry and the high sampling weights that sometimes were assigned to them. Because of this, detailed industry statistics were possible only from the large company partition; detailed industry statistics from the small company partition were not possible. Statistics from the small company partition are shown separately and are included in manufacturing, nonmanufacturing, and all industries totals. For more detailed information, please see "frame creation" and "sample selection" in Section B.

KEY: -- = Indicates data not collected.

NOTES: Starting with the 1999 survey, estimates are based on the North American Industry Classification System (NAICS). In prior years, estimates were based on the Standard Industrial Classification (SIC) system.

The calculation of the "percentage of companies that responded to the survey" was based on all companies that responded to the survey, including those that reported they were out of scope, out of business, or had merged with another company. It excludes companies for which total R&D expenditure data were imputed. Mathematically, the percentage was calculated by dividing the number of companies that received a questionnaire (indicated in the previous column) into the number of companies that returned a response or questionnaire regardless of the data or information supplied in the response or on the questionnaire.

The "number of companies that received a questionnaire" is less than the number of "companies selected for the sample" in Table B-1 because some companies selected for the survey went out of business or were merged with other companies during the time between sample selection and survey mailout.

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Industrial Research and Development: 1999